

ABSTRACT OF THE DISCLOSURE

Waveguide devices and schemes for fabricating waveguide devices useful in applications requiring modulation, attenuation, polarization control, and switching of optical signals are provided. In accordance with one embodiment of the present invention, a method of fabricating an integrated optical device is provided. The method comprises the acts of: (i) providing a support wafer defining an electrode support surface; (ii) forming an electrode pattern over the electrode support surface of the support wafer; (iii) forming a non-polymeric buffer layer on at least a portion of the electrode pattern and over at least a portion of the support wafer; (iv) forming a waveguide core material layer over the non-polymeric silica-based buffer layer; (v) removing portions of the core material layer to define a waveguide core; and (vi) positioning a cladding material in optical communication with the waveguide core such that the buffer layer, the cladding material, and the waveguide core define an optically-clad waveguide core.